

Exploration of the Transformation of the Design Professional Teaching Model under the Background of ChatGPT

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Abstract: The popularization and application of ChatGPT have greatly changed the creative ecology of the design industry and its standards for design talent. Under such circumstances, the traditional teaching model of design majors in colleges and universities can hardly meet the personalized and diversified learning and development needs of students, and urgent reform is needed. Based on this, this paper takes ChatGPT as the research background, and mainly explores the significance, existing problems, and practical paths of the transformation of the teaching model of design majors in colleges and universities. The paper aims to further promote the high-quality development of design majors in colleges and universities, so as to cultivate more interdisciplinary design talents with a solid professional foundation, high practical ability, certain technical literacy, and innovative ability.

Keywords: ChatGPT; Design major; Teaching model; Transformation strategy

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1. Introduction

With the rapid development of artificial intelligence technology, ChatGPT, as a typical representative of generative AI, has rapidly penetrated into various industries relying on its powerful natural language processing, knowledge integration, and creative generation capabilities, bringing profound changes to people's production methods and thinking patterns^[1]. The design industry is highly comprehensive, integrating art, technology, and the humanities. Its creative logic and working methods are being changed by the popularization and application of ChatGPT, gradually shifting from the original "human-led" to "human-machine collaboration"^[2]. As the main base for training design talents, design majors in colleges and universities should attach importance to the transformation of teaching models in the face of opportunities and challenges brought by ChatGPT, and actively explore the realization path of the deep integration of ChatGPT and design teaching. This will help solve the dilemmas of traditional teaching, such as

disconnection from reality and single method, and support the high-quality development of design majors in colleges and universities.

2. Significance of transforming the teaching model of design majors in colleges and universities in the background of ChatGPT

2.1. Promoting the connotative development of design majors and improving the teaching system

On the one hand, the application of ChatGPT can break the disciplinary barriers of traditional teaching, promote the integration of design with artificial intelligence, computer science, literature, art, and other disciplines, help enrich the knowledge structure of design teaching, and broaden the field of design education^[3]. On the other hand, the application of ChatGPT can promote colleges and universities to optimize and reconstruct the teaching objectives and contents of design majors, delete contents disconnected from the industry, and form a design teaching system more in line with the requirements of the new era, which is conducive to the connotative development of design majors.

2.2. Connecting with industrial development needs and realizing industry-education collaborative education

At present, the design industry is in a new era of human-machine collaborative creation. Artificial intelligence such as ChatGPT has been widely used in design fields such as creative generation, scheme optimization, and copywriting, which undoubtedly puts forward higher requirements for the professional ability, technical application ability, and innovation ability of design practitioners^[4]. Transforming the teaching model of design majors based on ChatGPT can promote the precise connection between teaching and industrial needs, enable students to be familiar with the application environment and operation of artificial intelligence during their studies, adapt to the working mode of the industry in advance, and thus realize industry-education collaborative education.

3. Existing problems in the transformation of the teaching model of design majors in the background of ChatGPT

3.1. Outdated teaching concepts and misunderstandings in technology application

At present, some teachers of design majors in colleges and universities have relatively outdated teaching concepts and an inadequate understanding of ChatGPT, with two misunderstandings in technology application. On the one hand, some teachers believe that the application of ChatGPT will replace the teaching status of teachers and weaken students' creative ability, so they are unwilling to integrate ChatGPT into teaching, resulting in the disconnection between teaching and the actual development of the industry^[5]. On the other hand, some teachers rely too much on ChatGPT, take it as the main teaching method, and blindly let students use the ideas and optimized schemes generated by ChatGPT to complete design learning tasks, ignoring the cultivation of students' innovative ability. As a result, it is difficult for students to further improve their practical ability, logical analysis ability, and innovative ability. In addition, some teachers do not have enough knowledge of ChatGPT and cannot skillfully use this technology for teaching, leading to superficial application of technology^[6].

3.2. Delayed update of teaching contents, disconnected from technology and industry

At present, the teaching content of some design majors in colleges and universities is not updated in a timely manner. They still focus on the teaching of basic skills and theoretical knowledge, and lack the integration of the application of artificial intelligence tools, including ChatGPT, cutting-edge industrial trends, and interdisciplinary knowledge. Some teaching content is outdated and divorced from the actual work of the industry, making it difficult for students' knowledge and skills to meet workplace requirements and quickly adapt to the human-machine collaborative creation mode of the design industry in the new era.

3.3. Lack of ethical education and non-standard application of technology by students

The application of ChatGPT in teaching is prone to a series of ethical problems, such as intellectual property infringement, creative plagiarism, and technology abuse. However, ethical education is generally lacking in the teaching of design majors in colleges and universities^[7]. Some colleges and universities have not integrated design ethics and ChatGPT application ethics into teaching, resulting in students' lack of awareness of intellectual property protection and academic integrity, and failure to properly avoid ethical risks caused by AI applications. In addition, some students cannot identify and optimize the content generated by ChatGPT, and blindly use the design schemes generated by ChatGPT, resulting in works lacking emotional expression and originality.

4. Practical paths for the transformation of the teaching model of design majors in the background of ChatGPT

4.1. Updating teaching concepts and establishing a scientific view of technology application

Under the background of ChatGPT, teachers of design majors in colleges and universities need to update their teaching concepts, establish a scientific view of technology application, correctly understand the enabling role of ChatGPT in teaching, and abandon extreme attitudes of resistance or over-reliance on technology^[8]. On the one hand, colleges and universities should strengthen the concept training for teachers, so that teachers can correctly realize that ChatGPT is an auxiliary tool for teaching rather than a substitute. Its main role is to provide students with creative inspiration, resource support, and personalized guidance to better improve their innovative and practical abilities. On the other hand, teachers should take the concept of "creativity-led, technology-enabled" as guidance, use ChatGPT scientifically in teaching, and guide students to correctly use artificial intelligence tools for creative design, so as to realize human-machine collaborative teaching.

4.2. Optimizing teaching contents and realizing precise connection with technology and industry

The optimization of teaching content is the key to the transformation of the teaching model. Therefore, under the background of ChatGPT, design majors in colleges and universities need to update teaching content in a timely manner according to the technical characteristics of ChatGPT and the future development trend of the design industry^[9]. On the one hand, colleges and universities should retain the basic contents of design majors, such as modeling design, color matching, and software operation, to consolidate students' design foundation. On the other hand, colleges and universities need to add the application of artificial intelligence

tools such as ChatGPT, including AI creative generation, scheme optimization, and copywriting, so that students can have AI application ability and learn to use artificial intelligence tools for creative design. In addition, colleges and universities can increase the teaching infiltration of interdisciplinary knowledge, promote the deep integration of design with artificial intelligence, literature, art, and other fields, enrich students' knowledge system, and improve their interdisciplinary integration ability. Meanwhile, colleges and universities can adjust teaching content according to the characteristics of different design majors to improve the pertinence of teaching, and timely integrate cutting-edge industrial cases, technical standards, and development trends into teaching. This will ensure that teaching contents are consistent with the development of the design industry and further improve students' post-adaptability^[10].

4.3. Innovating teaching methods and strengthening interaction and practicality

Under the background of ChatGPT, teachers of design majors in colleges and universities should innovate teaching methods according to the technical characteristics of ChatGPT, strengthen the interaction and practicality of teaching, so as to enrich students' learning experience and improve teaching effect. On the one hand, teachers should actively construct an interactive teaching mode of "teacher guidance, student subjectivity, ChatGPT assistance", fully mobilize students' subjectivity, let students independently use ChatGPT for inquiry and cooperative learning, and encourage students to interact with teachers, classmates and ChatGPT to exchange ideas and share creativity, so as to stimulate students' learning interest and creative potential^[11]. On the other hand, teachers should also pay attention to the optimization and improvement of practical teaching links, actively introduce real design project tasks, let students connect the application of ChatGPT with actual design practice, and promote students to improve their professional skills and innovative ability in practice, so as to realize the deep integration of theory and practice. In addition, teachers can use ChatGPT to provide students with personalized learning guidance and resources to better meet the personalized and diversified learning needs of different students.

4.4. Strengthening the construction of teaching staff and improving teachers' teaching and technical ability

Under the background of ChatGPT, strengthening the construction of teaching staff can lay a solid foundation for the transformation and implementation of the teaching model of design majors in colleges and universities. Therefore, colleges and universities need to attach importance to the optimization of teaching staff, focusing on improving teachers' AI application ability, teaching innovation ability, and industrial practical ability. On the one hand, colleges and universities can carry out special training for design teachers, invite experts in the AI field and experienced designers in the industry to hold lectures and special skill training activities, so that teachers can systematically master the technical principles, usage methods, and application fields of ChatGPT^[12]. On the other hand, colleges and universities should also encourage teachers to go deep into industrial practice, so that they can fully understand and master the latest development trends and technology application of the design industry. This will help better integrate industrial resources with teaching contents and improve the pertinence and practicality of teaching^[13]. In addition, colleges and universities should introduce a group of interdisciplinary talents with AI application ability and design industry experience to enrich the teaching staff and optimize the faculty structure according to their actual situation. They should also include the application ability of ChatGPT, teaching innovation ability, and industrial practical ability into the assessment scope, so as to fully stimulate teachers' enthusiasm and

innovation motivation in using ChatGPT for teaching.

4.5 Strengthening ethical education and standardizing students' AI application behavior

To avoid ethical problems in technology application, teachers of design majors in colleges and universities need to strengthen ethical education for students, integrate design ethics and AI application ethics into teaching, so as to help students form a correct ethical outlook and consciously standardize their AI application behavior^[14]. On the one hand, colleges and universities should offer special ethical courses to explain the application boundaries of AI, intellectual property protection, academic integrity, and other knowledge to students, so that students can understand the harms of creative plagiarism and academic misconduct using ChatGPT, and improve their ethical awareness and sense of responsibility. On the other hand, teachers should carry out ethical education for students in daily teaching, guide students to learn critical analysis and improvement of generated content when using ChatGPT, and not blindly rely on AI, so as to effectively cultivate students' original thinking and critical thinking^[15]. In addition, colleges and universities should establish and improve students' AI application code of conduct and supervision system, review students' design achievements, and guide students to establish a correct concept of human-machine collaborative design. This will help students understand how to use ChatGPT to assist in idea generation and scheme improvement, and further promote the deep integration of technology and design creativity.

5. Conclusion

In short, the emergence and popularization of ChatGPT have brought new opportunities and challenges to the transformation of the teaching model of design majors in colleges and universities. Under the background of ChatGPT, the transformation of the teaching model of design majors is not a simple superposition of technology, but a comprehensive reconstruction of teaching concepts, contents, and methods. In practice, colleges and universities can realize the transformation of the design teaching model based on ChatGPT through measures such as updating teaching concepts, optimizing teaching content, innovating teaching methods, strengthening the construction of teaching staff, and enhancing ethical education. This will cultivate more interdisciplinary talents who can quickly adapt to the development needs of the design industry in the new era, and inject new impetus into the development of China's design industry.

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References

- [1] Gu Y, Chen Y, 2024, Optimization Practice of Practical Teaching of Product Design Major Oriented by Industry-Education Integration under the Background of Education Empowerment. *Art Education Research*, 2024(24):

142–144.

- [2] Zhao YY, 2024, Research on the Application of AI in the Teaching of Visual Communication Design Major. *Toy World*, 2024(12): 221–223.
- [3] Zhou Y, Huo XR, Sun JZ, 2024, Reform of Environmental Design Major Teaching Model in the Digital-Intelligent Era. *Shanghai Fashion*, 2024(12): 132–134.
- [4] Wu Y, 2024, Transformation of Environmental Design Major Curriculum Teaching under the Background of AIGC. *Shanghai Fashion*, 2024(11): 195–200.
- [5] Jiang M, 2024, Research on Teaching Reform Strategies of Visual Communication Design Major in the Digital New Media Era. *Shaanxi Education (Higher Education)*, 2024(11): 30–32.
- [6] Zheng Z, Wan CL, Zhang R, 2024, Reform and Practice of “Four-Layer and Two-Penetration” Teaching for Design Major Courses in Colleges and Universities in the Digital Era. *Hunan Packaging*, 39(5): 221–223.
- [7] Dai YJ, 2024, Research on Teaching Reform and Practice of Environmental Design Major in Digital Innovation. *Education and Teaching Forum*, 2024(42): 79–82.
- [8] Xu F, Wu YS, Lu RH, et al., 2024, Diversified Integrated Design of Curriculum Ideology and Politics and Professional Teaching in the Digital Era. *China Logistics & Purchasing*, 2024(20): 34–35.
- [9] Xing Y, Gao XY, 2024, Exploration of Digital Teaching Reform of Environmental Design Major in the General Artificial Intelligence Era. *Art Education Research*, 2024(19): 122–124.
- [10] Wang HL, 2024, Research on Curriculum Teaching Reform of Digital Media Art Design Major from the Perspective of AIGC. *Tiangong*, 2024(29): 75–77.
- [11] Li G, Deng ZX, Wang Y, 2024, Exploration on the Teaching Reform Model and Strategies of Art Design Majors in Colleges and Universities under the Information Background. *New Art Region*, 2024(10): 107–109.
- [12] Zhi FR, Yu BY, 2024, Research on Practical Teaching Reform of “Three-Stage and Three-Integration” Model of Environmental Design Major under the Digital Background. *Art Market*, 2024(10): 114–115.
- [13] Jin JY, 2023, Research on Teaching Innovation of Visual Communication Design Major in Colleges and Universities in the Digital Era. *Way to Success*, 2023(26): 113–116.
- [14] Wu H, 2023, Analysis on the Teaching Model and Methods of Art Design Majors in Colleges and Universities. *Art Education Research*, 2023(15): 162–164.
- [15] Li H, 2022, Research on the Application of Blockchain Technology in the Education and Teaching of Art Design Majors in Higher Vocational Colleges. *Science Consult*, 2022(23): 250–252.

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